438 A large-scale industry had developed.[1] In place of the semi-handicraft workshops which predominated in the old days, large modern
433 factories arose. The timber industry was modernized and developed for increased production of prefabricated dwellings, paper, cardboard, matches, chemical products, and artificial silk. Industries, such as meat-packing, starch and treacle, distilling, dairy produce, tanning, and flax, were highly developed. The mineral resources of the country served as a basis for the building up of the pottery, glass, cement, and similar industries. The engineering plants in Byelorussia turned out machine tools, agricultural machinery and peat-cutting machinery. The extraction of peat was conducted on an extensive scale.

433 After the Revolution, agriculture in Byelorussia also underwent
241 a fundamental change. The individual peasants united in collective
474 farms (kolkhozes) in which they jointly cultivated the soil and had their co-operative dairy farms, piggeries, poultry runs, and beehives. They received substantial assistance from the state in the form of financial credits, tractors, harvester combines, and other agricultural machinery, seeds, equipment for draining marsh-lands, and innumerable other kinds of assistance. Under the Soviet system the cultivated areas of Byelorussia increased considerably, and in 1937 exceeded that of 1913 by 35 per cent.

## Area and Population

### Area

131 The present area of the Byelorussian Republic is about 228,300 square kilometres. Nearly half of this territory was added in September 1939 when, after the collapse of the Polish State, Western Byelorussia, which had been seized by Poland in 1920, was rejoined to the B.S.S.R. as part of the Soviet Union. The area of this region was 108,000 square kilometres, and the population, 4.8 millions. Of this added territory, 35.5 per cent. was classified as arable, 23.5 per cent. as forests, 24 per cent. as pastures and meadows, and 1.5 per cent. as gardens and orchards.

In August 1940 the area of Byelorussia decreased somewhat when parts of the Vileika and the Baranovichi provinces were transferred
[728] from the B.S.S.R. to the Lithuanian Soviet Republic. Another small decrease occurred after the war in Europe had ended; in August 1945 a treaty was signed between Poland and the U.S.S.R., adjusting the Soviet-Polish frontier roughly along the "Curzon Line", with some deviations in Poland's favour. In consequence of this, Poland received a small strip of the territory which had been previously incorporated in the B.S.S.R., including the largest town of Western Byelorussia, Bialystok.

### Population

162 At the census of January 1939 the population of the B.S.S.R. was 5,567,976 (an increase of 11.7 per cent. over December 1926, when the

[1] [Between 1919 and 1941 -- Analyst]

## II AGRICULTURE, LIVESTOCK BREEDING AND FISHING

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Before the war Byelorussia was one of the largest flax and potato-growing areas in the Soviet Union. In 1937, two years before the incorporation of Western Byelorussia, there were 255,000 hectares sown to flax and 631,000 hectares sown to potatoes in the B.S.S.R. The chief food crop produced in this Republic was grain (rye, wheat, oats, and barley), which occupied about 60 per cent. of the total area sown. In 1937 2,243,500 hectares were planted in grain, including 242,500 hectares of wheat, which before 1917 was produced on a very small scale.

The following table shows the area of the principal crops in the Byelorussian Republic in 1932 and 1937, compared with cultivated areas in the Soviet Union as a whole.

TABLE III

Byelorussian S.S.R.: Area of Principal Crops, 1932 and 1937
(thousand hectares)

| | Byelorussian Republic | | Soviet Union | |
|---|---|---|---|---|
| | 1932 | 1937 | 1932 | 1937 |
| Wheat | 111 | 242.5 | 34,500 | 41,300 |
| Rye | 1,313 | n.a. | 25,800 | 22,700 |
| Oats | 613 | " | 15,400 | 17,600 |
| All grain total | 2,627 | 2,243.5 | 99,700 | 104,400 |
| Potatoes | 619 | 631 | 6,100 | 6,900 |
| Flax and hemp | 279 | 255 | 2,500[1] | 2,125[1] |
| Orchards and gardens | 76 | n.a. | n.a. | n.a. |
| Total area under crop | 3,983 | 3,514 | 134,400 | 135,300 |

1 Flax only.

Note: n.a. means not available.

Sources: Development of the Soviet Economy, Moscow, 1940; Second Five Year Plan, Vol. II, Moscow, 1934; Socialist Construction, Moscow, 1939; and Sown Areas of the U.S.S.R., Moscow, 1939.

From 1932 to 1937, as the table shows, there was a decrease of 468,000 hectares in the area under cultivation in the B.S.S.R. Average yields of all crops, however, had been increased to a great extent, so that total production was raised by several million tons.

TABLE IV

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Byelorussian S.S.R.: Production of Principal Crops, 1932 and 1937
(thousand metric tons)

| | Byelorussian Republic | | Soviet Union | |
|---|---|---|---|---|
| | 1932 | 1937 | 1932 | 1937 |
| Wheat | 77.4 | 202.6 | 20,310.0 | 46,860.0 |
| Other grain | 1,616.3 | 1,618.3 | 49,480.0 | 73,430.0 |
| Total grain | 1,693.7 | 1,820.9 | 69,790.0 | 120,290.0 |
| Potatoes | 5,061.0 | 7,005.6 | 43,070.0 | 65,630.0 |
| Flax | 57.4 | 71.4 | 500.0 | n.a. |

Sources: Socialist Construction, Moscow, 1936 and 1939; Sown Areas of the U.S.S.R., Moscow, 1939; and Socialist Agriculture, Moscow, 1939.

Since the natural fertility of Byelorussian soil is not very high, improvements in the yields of various crops depend greatly on efficient cultivation, particularly on generous fertilizing, and other modern measures (including mechanization) which were widely applied on the farms of the U.S.S.R. during the collectivization of agriculture.

## Collective Farms (Kolkhozes)

474 The greatest agricultural problems of the Soviet Union have been to increase the area under cultivation, to improve the methods of production, to raise yields per hectare as well as total production, and from this increased production, to insure that adequate supplies of food reach the towns and factories. The primary means of achieving these aims was the organization of individual farmers into collectives (kolkhozes), in which they could jointly maintain their livestock and work the land, using the most scientific methods of livestock breeding, soil cultivation, crop rotation and fertilizing, but above all, increasing the use of farm machinery. In the long run mechanization, with the replacement of horses by tractors, makes a greater area available for grain and other agricultural products such as potatoes and flax.

475 An outstanding feature of these new developments was the establishment of machine and tractor stations (M.T.S.), in which the government concentrated thousands of tractors, threshers, combines, and other large machines. The M.T.S., which had their own workshops and staffs of mechanics, carried out all the mechanized farm work for the collectives - ploughing, sowing, harvesting, etc. - in return for which they received fixed fees, payable in agricultural produce.

727 Livestock was practically wiped out;[1] the Germans had confiscated
231 more than two million head of cattle, three million pigs, and three million sheep and goats. A few cattle had been hidden away in the woods and swamps. The only horses left were those which had been either too old or too small for any use, and therefore discarded by the German or Soviet armies. Most small livestock had disappeared, and poultry and bees had vanished completely.

727 The land itself was in a terrible condition.[1] Orchards were
241 neglected; and drainage systems had been either deliberately ruined
433 to flood the land, or permitted to deteriorate. Crop areas had sharply decreased, and yields fell drastically for want of fertilizers and draught power to cultivate the land efficiently. The area of cereals had fallen by 42 per cent., that of technical crops by 86 per cent., and of potatoes, by 53 per cent. Crop rotation had been completely upset, and grasslands ruined. Nearly 20 per cent. of Byelorussian territory was literally a desert.

When the UNRRA Mission arrived in Byelorussia nearly two years after the liberation, agricultural conditions had not materially improved. In the course of a tour through eastern Byelorussia in June 1946, Mission members reported that "throughout the northeast region at least half the rural houses are destroyed." Some regions showed even greater destruction; in the Surazh region east of Vitebsk, only 661 houses remained in 1944 out of 10,136 pre-war dwellings. The town of Surazh itself had 1,395 buildings before the war, of which only three were standing in 1944. By June 1946 there were 150 buildings in the town, all newly built except the three mentioned.

In the Polotsk and Vitebsk oblasts (provinces) only 58 and 64 per cent. respectively of the pre-war crop areas were under cultivation in 1946, two years after the liberation. In 1945 the crop yields were only 25 per cent. of pre-war production. The UNRRA Mission stated: "The low yields and unplanted lands are largely due to lack of tractors and to the plough-land having become overgrown with woods and brush since 1941. A large proportion of cropland is reported to be now idle because of uncleared mines, trenches, gun emplacements, etc. In the Surazh region uncultivated battlefields total one-quarter of the pre-war 87,500 acres of crop land."

The Polotsk and Vitebsk provinces possessed before the war 115,000 horses and 2,290 tractors; and about 2 million acres of land were under cultivation. In 1946 only 24,000 horses and 760 tractors were available; and 40 per cent. of the cropland remained uncultivated.

000 Since the time of these observations UNRRA Mission members have made many more inspection tours throughout the Republic. Among the many places they have had opportunity to observe was the Lenin Collective Farm in the Minsk raion (district), which they visited in December 1946. Because the experience of this farm is fairly typical, a small part of its history is reproduced in the following paragraphs.

[1] [In the war period from June 1941 to the summer of 1944 -- Analyst]

474 Special mention should be made of the hopyard, which before the war was a very profitable enterprise, bringing in a gross income of 65,000 roubles in 1940. The hops died out during the war and were replanted in 1946; they are expected to produce a marketable crop this year (1947).

433 Productivity of the Lenin collective farm[1] in 1946 was down to
241 40 per cent. below pre-war yields. The grain yield was 1,0 to 1.2
474 metric tons per hectare, compared with yields of 1.6 to 1.8 tons per hectare before the war. The potato crop was only 8 tons per hectare, half the pre-war yield of 16 tons, because the farm had unusually bad luck with potatoes in 1946, several fields being washed out completely.

The extreme decline is attributed to shortages of artificial fertilizers, formerly used in large amounts; the shortage of manure, resulting from the greatly diminished livestock herds; and the lack of machinery and manpower.

Ploughing is shallower than before the war; and seed bed preparation, less careful. The farmers realize that their ploughing and seed bed preparation are below the standards of good farm practice, but they are unable to do better until they get more tractors, implements, and horses. Before the war this farm customarily hired three or four tractors from the M.T.S.; in 1946 it was able to secure only one. Only 86 horses were available in 1946, and these on the average were smaller than before the war, and could not be fed as well. However, productivity in 1946 was greater than in the preceding year, chiefly because the farm had more men, more horses, and more equipment.

The Extent of the Post-War Recovery

433 In the Byelorussian Republic as a whole the crop year 1945 was the
241 first full year of reoccupation by Byelorussians. By 1946 agricultural production had made definite progress toward supplying the population with food. The sown area in 1946 reached 76 per cent. of pre-war, but the level of yields was depressed by inadequate soil preparation, shortages of fertilizers, and unfavourable weather. As a result the grain crop, although better than in 1945, was still only half of pre-war. The vegetable crop, grown largely from UNRRA seeds, was from 75 to 80 per cent. of pre-war in total production; while the potato crop, because rainfall was heavy during part of the growing season and because plantings were only 60 per cent. of pre-war, reached less than half pre-war in total output.

Seed Production

433 The inadequacy of seed supplies has been a serious hindrance to
246 full recovery of the pre-war area of cultivation. Particularly short were vegetable seeds (except potatoes), clovers, vetch, and timothy and other grasses, most of which are biennials or perennials requiring two years for the production of seed. There is also a shortage of flax seed;

[1] [See cat 116, pp 15-... 4.3.1947]

433 and the restoration of this crop is important not only to provide fibre
246 for the linen industry, but also to supply linseed oil, which is then further refined to produce edible oil, supplementing animal fats in the diet.

Clovers are especially needed to plant alternately in the areas where flax is grown. Both clover and timothy seed production were lost during the war. The improvement of these crops would do much to assist the rehabilitation of decimated and under-sized livestock herds. Plans have been made to reach a self-sustaining level of vegetable seed production by the spring of 1948. Adapted and satisfactory varieties of UNRRA seed are being used as parent stock.

Fertilizers

433 Fertilizers are an urgent requirement, as the low fertility of Byelorussian soil necessitates using large quantities both of manure and of chemicals. All are in extremely short supply. The fertilizer available in 1946 was only 15 per cent. of pre-war. The Byelorussian Minister of Agriculture estimated that in 1946 only 25 to 30,000 tons of potash were used, as compared with 160,000 tons before the war. As an example, one collective farm in the Polotsk oblast used before the war about 600,000 tons of fertilizers, but had only 500 tons in 1946.

In view of the shortage of manure and of the naturally slow progress in restoration of the soil-fertilizing grass and leguminous crops, large-scale measures are being taken in the B.S.S.R. to utilize peat as a fertilizer; the plan for 1947 is to use over 5 million tons.

Drainage Projects

312 Before the war Byelorussia was executing a plan for the ultimate drainage and reclamation of four million hectares of swamp land. Progress had been made by 1941 to the extent of reclaiming and planting 270,000 hectares. During the war the drainage system deteriorated, and in some places was deliberately destroyed to flood areas for defence purposes. Trench-digging and dredging machinery was removed by the Germans. Work on the restoration of the drainage canals began shortly after liberation; 25,000 hectares of drained land were restored to cultivation in 1945, and it was expected to restore an additional 33,000 hectares in 1946.

Farm Machinery

401 Farm machinery was, and is, badly depleted. In 1946 only three to five per cent. of the seeding of crops was done by machines; and tractors ploughed only about 20 to 25 per cent. of the cropland. The number of tractors available in 1946 was 25 to 30 per cent. of pre-war; but most of the machines were in bad condition, having been patched together from spare parts. It was hoped that UNRRA would be able to make early deliveries of tractors to the B.S.S.R.; but despite the urgency of the need, the Administration was not able to supply any

Livestock

231 Livestock production in 1946 was still less than a fourth of pre-war, and it was estimated that five years were necessary to restore it fully. Cattle numbers in May 1946 were reckoned by the UNRRA Mission at 30 to 35 per cent. of pre-war; pigs at 10 per cent., and sheep and goats at 25 per cent. Horses, although about 40 per cent. of the pre-war numbers, represented only about 25 per cent. of pre-war horsepower, because of age and small size.

One must bear in mind that these figures include not only the surviving livestock, but also gifts from other parts of the Soviet Union. Since the liberation, tens of thousands of cattle have been sent to Byelorussia by other Republics.

The pre-war numbers of livestock in Byelorussia, West Byelorussia, and the Soviet Union are shown in the table below.

TABLE VI

Pre-War Livestock Numbers in Byelorussia, West Byelorussia and the U.S.S.R.

| | Byelorussian Soviet Socialist Republic | | Western Byelorussia | Entire Soviet Union | |
|---|---|---|---|---|---|
| | 1932 | 1937 | 1938 | 1934 | 1938 |
| Horses | n.a. | 700,000[1] | 779,000 | 15,400,000 | 16,200,000 |
| Cows | 962,800 | 1,027,200 | 1,306,000 | 33,500,000 | 50,900,000 |
| Other cattle | 391,900 | 878,100 | 631,000 | | |
| Pigs | 1,054,400 | 1,951,000 | 1,555,000 | 11,500,000 | 25,700,000 |
| Sheep and goats | 896,700 | 1,077,300 | 1,684,000 | 36,500,000 | 66,600,000 |

1 The 1935 figure

Sources: Socialist Construction, Moscow, 1936 and 1939; and Concise Statistical Yearbook of Poland, London, 1941.

In this table it is interesting to note that although in Western Byelorussia before 1939 there was almost no mechanization of agriculture, the number of horses claimed is only 9,000 more than in the Byelorussian Republic (approximately the same area) where tractors and other machines did 85 to 87 per cent. of the farm work.

433 As a result of the wartime decrease of livestock and of agricultural products, the production of fats and oils in the U.S.S.R. during 1946 was estimated to be only about 15 to 20 per cent. of pre-war. Before the war the principal sources of edible fats were lard and butter. Consumption averaged about 22 to 25 kilograms per head. The return of an adequate

433 supply is greatly dependent upon recovery in grain production. So long as the grain supply barely meets the needs for bread, very little will be used for hogs and cattle. To regain the pre-war production level of fats will require at least three to five years.

185 231 The Five Year Plan, 1946-50, provides that 17 meat packing plants, 10 poultry farms, 11 urban milk-processing plants, two milk canneries, and 150 dairies be restored or built in the B.S.S.R. As at December 1946 the Minister of Agriculture reported that 26,000 livestock farms were again functioning on collectives. These farms are looked to as the source of an estimated 35,000 tons of butter and cheese products in 1947.

Following is a table which shows the numbers of livestock in the B.S.S.R. in 1950, as fixed by the Five Year Plan.

TABLE VII

B.S.S.R.: Livestock Numbers in 1950 (Planned)

| | Total | Including on collective farms |
|---|---|---|
| Horses | 770,000 | 330,000 |
| Cattle | 2,860,000 | 852,000 |
| Pigs | 2,600,000 | 300,000 |
| Sheep and goats | 2,900,000 | 600,000 |

231 Source: The Five Year Plan, 1946-50.

It will be noted that the proportion of livestock held on the collectives is not great, except in the case of horses, which are regarded as means of production, and are therefore not allowed in private ownership. A comparison of the preceding figures with those in Table VI shows how heavily the war has reduced the numbers. It is particularly important to note that the number of horses for 1950 is fixed far below the pre-war number existing in Byelorussia after the incorporation of the Western region. As has already been seen, the lack of these animals is the more seriously felt because of the limited number of tractors available.

Improvement of the Collective Farm Organization

731 Despite the major difficulties, Byelorussian farmers in 1946 made considerable progress toward regaining the ground lost during the war. In this respect, they were more fortunate than those in other areas of the Soviet Union, to whom 1946 brought disaster. From Moldavia to the Urals, south to the Kuban and north to Moscow, crops were ruined by the worst drought since 1891. Particularly stricken was the Ukraine, which before the war supplied one-fifth of the grain for the entire U.S.S.R.

731 This natural catastrophe, in addition to all the other burdens of post-war recovery, has necessitated even greater efforts by the farmers to overcome handicaps and to boost production as high as their hardest labours will allow.

474 The Soviet Government has, since the drought,[1] taken additional steps to eliminate difficulties and to strengthen the collective farm management. On September 19, 1946, the Council of Ministers of the U.S.S.R. and the Central Committee of the Communist Party of the U.S.S.R. issued a decree calling for the elimination of abuses of the collective farm charter. [647] A Collective Farm Council was created, the main tasks of which are to establish "strict control over the observation of collective farm statutes"; to guard the collective farm property against embezzlement or misuse; and to ensure greater participation in the farm management by the workers themselves.

Under the new regulations of September 1946, all lands illegally taken from the collectives are being restored. Sovietskaya Byelorussia reported: "More than 31,000 hectares of land... have been returned to the collective farms (in Byelorussia)." Unauthorized personnel are being taken off the payrolls; administrative staff is being reduced; and the collective farmers are taking greater part in the administration of the kolkhoz. General meetings are called regularly, and management and auditing committees elected by the membership are responsible for reporting back to the membership. "The democratic procedure of convening general meetings for discussion of and decision on vitally important questions... is now being returned."[1]

## Planned Increases in Agricultural Production

185 433 According to the Five Year Plan, 1946-50, the crop area of the B.S.S.R. in 1950 is to reach 5.3 million hectares, including 3.2 million hectares under grain, 344,000 hectares under industrial crops, 1.06 million under potatoes, vegetables, and fruit, and 690,000 hectares under fodder crops.

Average yields of all crops are expected to be as follows: grain, 1.03 metric tons per hectare; potatoes, 14.5 tons per hectare; and flax, 0.3 tons per hectare. These are somewhat lower than the yields fixed for the Soviet Union as a whole because of the relatively poor quality of the soil in Byelorussia: for example, in the B.S.S.R. in 1950 the average yield of grain is to be 1.2 metric tons per hectare, while that of flax is put at 0.4 tons per hectare.

According to the Moscow periodical, Slavyane (1946, II-III, pp.32-35), the B.S.S.R.'s total production of grain in 1950 will represent an increase of 10 per cent. over 1940. On this basis, the 1940 grain harvest must have been between 2.7 and 3 million tons. In the U.S.S.R. the 1940

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1 Sovietskaya Byelorussia, Minsk, December 20, 1946.

[1 In 1946--Analyst]

185 grain crop amounted to 119 million tons, and the target for 1950 is set
• 433 at 127 million metric tons. Production of potatoes in Byelorussia is to increase by 6 per cent., and of flax by 31 percent.

## Fishing

226 Before the war fishing was an important source of food supply in Byelorussia, where the many inland lakes and streams abound in pike, perch, bass, sandre, bream, and other fresh-water fish. Osweia Lake, a body of water about 3,500 acres in extent, produced some 500 tons of fish annually, when 50 men were engaged in year-round fishing. At that time the fishing collective at the lake employed nets measuring almost a mile in overall length; but today very little fishing is being done for lack of nets and other equiptment. Osweia is not an isolated example.

[227] An extensive system of fish culture, including the stocking of fish and the addition of chemical fertilizers to assist plant growth in the lakes, was destroyed during the war. The Germans depleted available fish resources by discharging explosives under water to bring the stunned fish to the surface. Many young fish were exterminated by this method of explosive fishing, without regard to conservation. At present the system of fish culture in Byelorussia is being slowly reinstituted, but is handicapped by the lack of nets. UNRRA shipments of fishing gear have, however, contributed valuable assistance in this regard.

The new Five Year Plan provides that "by 1948, pond culture will be restored to pre-war proportions."

The fish catch in 1950 is expected to be 5,200 tons.

438 Minsk. Two large machine construction factories, "Kirov" and "Voroshilov"; the "Bolshevik" leather factory; the "Kaganovich" footwear factory; the "October" clothing factory; a peat plant, and a brick plant.

Mogilev. The "Dimitrov" machine construction factory; the "Kirov" motorcar repair works; the "Kuibyshev" silk factory; the "Stalin" leather factory; a pipe foundry, and a peat plant.

Vitebsk. The "Krasny Metallist" machine tools factory; the "Clara Zetkin" hosiery; the "KIM" hosiery and knitted fabrics factory, employing 10,000 workers; the "Kaganovich" flax mills, and many textile factories.

Gomel. The "Stalin" glass factory; the "Trud" footwear factory; the "Vesuvji" match factory, and a knitted fabrics factory.

• [433] Industrial output in this city increased 100 times in comparison with production before 1914. In addition to the large factories listed above, a big machine building works, "Proletary", produced turning lathes; and another large plant "Kaganovich", was constructed to turn out agricultural machines. Gomel being a large railway junction, railway truck building works and railway engine repair works were also built there.

Other cities. In the small towns of Byelorussia, where before 1917 there were no industrial enterprises at all, a number of plants were developed; for example, in Bobruisk, large wood processing and clothing factories; in Krichov, a large cement factory; and in Orsha, a flax mill, meat cannery and brick works.

433 Altogether, in the course of the pre-war Five Year Plans, industrial output in the B.S.S.R. increased considerably. The following table, reckoned in terms of 1926-27 prices, compares production in 1937 with the level of output in 1932.

TABLE VIII

• 433 B.S.S.R.: Industrial Output in 1932 and 1937
(in million roubles, 1926-27 prices)

| | 1932 | 1937 |
|---|---|---|
| Metalworking | 81[1] | 233[1] |
| Chemical | 43.9 | 106.7 |
| Woodworking | 115 | 201 |
| Paper | 10.5 | 42.1 |
| Hosiery | 29.6 | 117.3 |

1/ The output of the metalworking industry of the entire Soviet Union in 1932 and 1937 amounted to 9,410 million and 27,519 million roubles respectively.

Source: Socialist Construction, Moscow, 1939.

The gross industrial output of the B.S.S.R. in 1937 was 1,926 million roubles, as compared with 1,018 million in 1932 and only 116 million in 1913. In the Soviet Union as a whole, gross industrial output was 95,732 million roubles in 1937 as compared with less than half that amount (or 43,343 million roubles) in 1932.

Industrial Development of Western Byelorussia

Of the twelve oblasts which today comprise the Byelorussian Republic, five (Baranovichi, Brest, Pinsk, Grodno, and Molodechno) are in the western areas which were a part of Poland between 1920 and 1939. In 1939, when these oblasts rejoined the B.S.S.R., nearly 90 per cent. of their population was employed in agricultural work. The level of industry, as well as of agriculture, was very primitive, the yearly per capita industrial output being only 48 roubles, compared with 400 roubles per person output in the Byelorussian Soviet Republic. Despite the fact that in the western areas 88,000 hectares were under cultivation of flax in 1939, there were no flax mills in operation; whereas the B.S.S.R. by that time had 70 flax mills at work.

To overcome the relative backwardness of the western region and to assist the mechanization of agriculture, the Soviet Government invested 726,400,000 roubles there in 1940. In the period between incorporation and the German attack in June 1941, some increase in industrial output was achieved. For example, the match factory at Pinsk trebled its output.

727 Grodno, an important town in the western area, before the war had a bicycle plant, agricultural machinery works, a tobacco factory, lime works, and a shoe factory, all of which were demolished during the war. Brest, formerly named Brest-Litovsk, was a city of importance with a streetcar and sewer system and river traffic on the Bug. In August 1946,

339 "Before the war this factory was fully mechanized, driven by electric power from an 85 kilowatt dynamo and producing ten million bricks a year. Today the only mechanized processes are the elevation of clay and the actual mixing and pressing of the brick. The clay is dug from the nearby river bank by hand. Water is pumped from the river by hand, six women operating a rocker hand-pump, three at each handle. The freshly processed bricks are lifted by hand from the machine into small cars, and the latter are then pushed by hand over a track to the drying sheds and furnace where again all operations are by hand. Power for the processing machine is supplied by one antiquated 60-horse-power stationary steam engine which broke down once during our short visit.

[433] "The production goal for 1946 at this Polotsk plant[1] is four million bricks, estimated by the Russian director as enough to build 40 apartment houses of ten four-room apartments each. Present output is limited to the capacity of one double-nozzle pressing machine, which we estimated could produce approximately 23,000 bricks per eight-hour day. This output may be contrasted with the brick plant in the UNRRA programme which is to have a specified capacity of 60,000 bricks per eight hours."

727 Probably typical of the general industrial situation in 1946 was
393 a radio factory at Minsk, visited by UNRRA Mission observers in May.
433 Before the war it was said to be the largest radio factory in the Soviet Union, with an output of 1,000 radios weekly. The Germans removed all the machine tools and other equipment and wrecked the interior of the building, leaving only the outer walls standing. Partial rebuilding of this factory required more than a year. Machine tools were brought from Germany, and the factory in May 1946 was estimated to be producing some what less than a third of its pre-war rate. Before the war the factory had a staff of 2,200 persons. The labour force at the time of these observations was 550, plus 60 to 70 German war prisoners. Of the workers employed, only 50 had worked in that particular factory before the war. Many of the present workers are very young, some just in their teens; and a large percentage is women. Since the factory itself had no training programme, its workers were trained in the Labour Reserve.

323 Where no machine tools are available, progress is even more
433 limited, and the range of possible products is much reduced. For instance, the glass factory at Borisov is limited to hand-blown articles. No rolling equipment was available; hence no flat glass could be produced, although window glass was urgently needed for reconstruction of other industries and of housing. In the Vitebsk garment factory, the only sewing machines available are treadle-operated old fashioned models. In many instances, shoe production was largely confined to hand cobbling. Even where the factories have been restored and could produce more, the shortage of raw materials
433 depresses their output. The linen factory in Orsha was the largest in the Soviet Union before the war. In 1946 it was 70 per cent. restored, but flax production was so limited that the factory was

[1] [Brick factory No. 4--Analyst]

433 manufacturing linen from scraps. The aluminum factory in Borisov was making utensils, but the material available, all of which was supplied by UNRRA, was sufficient for only a small output.

## Labour

464 As has already been noted, there is a shortage of all categories of workers. The outstanding characteristic of the present force is the high percentage of women and youthful workers. In the factories observed by the UNRRA Mission, from 75 to 90 per cent. of the workers were women and young people. Many of these are being trained in special schools.

## The Five Year Plan in Industry

471 Under the new Five Year Plan for the rehabilitation of the Soviet economy, the volume of capital investments in the B.S.S.R. in 1946-50 is to be 6,950 million roubles, including 2,422 million for works under the Republic's jurisdiction. In the Soviet Union as a whole, capital investments for the same period are to amount to 250,300 million roubles, of which 157,500 million are to be used in industry.

433 185 The volume of production of Soviet industry in 1950 (the last year of the five year period) is fixed at 205,000 million roubles (in 1926-27 prices), an increase of 48 per cent. as compared with the 1940 output of 138,500 million roubles.

In Byelorussia, the volume of industrial goods produced by the Republic in 1950 is to exceed pre-war output by 16 per cent. The enterprises under the Republic's jurisdiction are to produce goods valued at 2,200 million, of which the output of state industries under local jurisdiction and of industrial co-operatives is to comprise 850 million roubles. The following table shows the physical goals fixed for Byelorussian industry under the Plan.

TABLE IX

433
185

B.S.S.R.: 1950 Planned Industrial Output Compared with U.S.S.R. Total

| | Byelorussian Republic | Soviet Union total |
|---|---|---|
| Electric power (kilowatts) | 650,000,000 | 82,000,000,000 |
| Peat (tons) | 4,162,000 | 44,300,000 |
| Metal-working machines (units) | 4,325 | 74,000 |
| Tractors (units) | 5,000 | 112,000[1] |
| Cement (tons) | 320,000 | 10,500,000 |
| Window glass (square metres) | 5,000,000 | 80,000,000 |
| Felled timber (cubic " ) | 11,100,000 | 280,000,000 |
| Dressed lumber (cubic metres) | 1,800,000 | 39,000,000 |
| Matches (thousand boxes) | 1,550,000 | n.a. |
| Meat (tons) | 46,000 | 1,300,000 |
| Butter (tons) | 10,000 | 275,000 |
| Fish catch (tons) | 5,200 | 2,200,000 |
| Alcohol (decalitres) | 7,600,000 | 100,800,000 |

1 Tractor production:

| | |
|---|---|
| Russian S.F.S.R. | 82,000 |
| Ukraine S.S.R. | 25,000 |
| Byelorussian S.S.R. | 5,000 |
| Total | 112,000 |

Source: The Five Year Plan, 1946-50.

The post-war Five Year Plan is a programme encompassing both reconstruction and new construction. Its aim is not only to restore war devastated industry, but to exceed pre-war production. Some indication of the expansion involved may be obtained from a comparison between Table IX and the following table, which shows the pre-war output of certain products for Byelorussia compared with the output of the Soviet Union as a whole. The figures given refer, of course, to the former boundaries of the Byelorussian Republic.

TABLE X

Output of Certain Products in the B.S.S.R., 1932, and Planned Output for 1937
(metric tons)

| | Byelorussian Republic | | Percentage of total U.S.S.R. output | |
|---|---|---|---|---|
| | 1932 | Planned for 1937 | 1932 | Planned for 1937 |
| Peat | 800,000 | 2,100,000 | 6.06 | 8.47 |
| Cement | n.a. | 110,000 | | 1.57 |
| Meat | 12,300 | 28,800 | 2.83 | 2.30 |

Source: Second Five Year Plan, Moscow, 1934, Vol. II, p.498.

185 433 Compared with 1940, the capacity of Byelorussian electric power stations in 1950 is to increase by 220 per cent.; peat production is to rise 127 per cent. above the 1940 output; the output of bricks and lime is to increase fourfold; and the production of tile is slated to be about nine times over 1940.

Among the twelve oblasts in the Republic, Minsk oblast is scheduled for the greatest industrial expansion. In the construction programme are new factories for the output of cloth, penicillin, Deft-ware, porcelain, peat briquettes, boilers, radiators, instruments, bicycles, motor trucks, and tractors. The 1950 output for the last three factories is to be 100,000 bicycles, 1,000 7-ton trucks and 5,000 tractors. In the city and environs of Minsk alone capital investments are scheduled at the rate of nearly one million roubles a day during the course of the five years.

Another area in which large developments are projected is Gomel oblast, which in 1950 is to produce 787,000 tons of peat, 90 million bricks and tiles, and five million square metres of window glass. (In 1928 the total Byelorussian output of window glass was estimated at 1,170,000 square metres.)

## Forestry

137 According to the census of January 1, 1935, the forest area of the B.S.S.R. was 3,817,000 hectares, 22.9 per cent. of the area of the Republic, and 0.6 per cent. of the total forest area of the Soviet Union. Another 2,538,000 hectares were added to the B.S.S.R.'s forest area in 1939, when West Byelorussia was rejoined to the Soviet Union.

### Timber

313 The production of commercial timber, largely pine, fir and oak, has been centred in the areas of Bobruisk, Mozyr, Borisov, and Polotsk. Timber is considered one of the most valuable of Byelorussia's natural resources, and has figured largely in her relatively insignificant export trade. In 1926-27, for example, an income of 20 million roubles was realized from export of timber, at a time when the Republic's budget totalled 80 million roubles, and the gross output of industry was valued at 135 million roubles. In 1924-25, the only year for which details on the export of timber are available, the timber shipped from the B.S.S.R. amounted to 587,000 cubic metres of firewood and 749,000 cubic metres of other timber. About 60 per cent. of this was sent to the Ukraine (within the U.S.S.R.) and the remainder, plywood, oak, pine, and other products, was shipped abroad via the Baltic States.

The advanced development of the timber industry in the B.S.S.R. is revealed by the number of sawing frames which the Republic had in prewar years. As at April 1, 1939, (before the incorporation of Western Byelorussia) the B.S.S.R. possessed 256 of the Soviet Union's 6,500 frames.

313 This high proportion should be contrasted with the small forest area of this Republic in relation to that of the whole U.S.S.R.

185 313 433 The goal set for timber deliveries by the B.S.S.R. in 1950 is 11,100,000 cubic metres; and cuttings during the period 1946-50 are planned at 58,400,000 cubic metres. The aggregate timber deliveries attained during four and one-quarter years of the first Five Year Plan, 1928-32, amounted to 32,600,000 cubic metres, or 7,670,000 annually. In 1928 it had been estimated that the timber resources of the B.S.S.R. were adequate to permit cuttings of 12 million cubic metres a year by 1932. This scale of cuttings was never reached, but the figure is mentioned here because it approximates the present plan of annual deliveries set for 1950, at a time when the area of Byelorussia is about double what it was in 1928.

The reason for this is that a large amount of easily accessible timber was burned out by the Germans during the war. The Governor of Vitebsk oblast, quoting from official figures, told members of the UNRRA Mission in June 1946 that 22 per cent. of the oblast was covered by good timber before the war but at present only 16 per cent. It was estimated by the Governor of Polotsk oblast that 46 percent. of the forests of the oblast were cut, burned or taken away during the war. Post-war cutting operations will therefore be restricted in many areas, and a reforestation programme will be carried out on an area of 189,000 hectares. Meanwhile, felling will be centred in the dense swamp areas previously untouched and impossible to exploit without extensive development of motor and narrow-gauge haulways provided for in the Five Year Plan.

Of the 1950 goal for timber production, 5 million cubic metres is set for annual production under the direction of the Timber Ministry of the B.S.S.R. An undisclosed amount will be produced under the auspices of local and co-operative industry. Although no full details are at present available, nevertheless, a few comparisons with pre-war production are possible. For example, in 1928 the production of plywood in Byelorussia amounted to 59,000 cubic metres, and in 1940 to 254,000 cubic metres (36.2 per cent. of the plywood output of the Soviet Union). In 1950 the plywood output of republican, local, and co-operative industry is scheduled to be 118,500 cubic metres. No pre-war figures are available for sawn lumber output, except for 1928, when 636,060 cubic metres were produced. The planned output of sawn lumber for 1950 is 1,800,000 cubic metres, nearly three times the 1928 amount.

[439] As for the export of timber, no figures are available, but it is known that Byelorussian timber has been and still is an important source of mine props for the Donets coal mines in the Ukrainian S.S.R. 313 However, in view of the tremendous shelter rehabilitation programme in 185 devastated Byelorussia, it does not seem likely that there will be much surplus timber available. Of 400,000 collective farm houses scheduled for restoration, only 60,000 are to be built of brick. An equal, if not larger, number of public buildings were destroyed on collective farms;

313 and only 22,700 are to be rebuilt of brick. The remainder, totalling
185 over a million buildings of all kinds in the rural areas alone will be rebuilt with timber. Urban shelter restoration will also require large amounts of lumber. (In 1946 the "Komintern" woodworking combinat in Bobruisk had milled 36,892 cubic metres of lumber, by October 27, of which 27,000 cubic metres was earmarked for restoration work in Minsk.)

471 Another indication of the current importance attached to the timber
313 industry is the fact that the largest investments in the 1946 state budget for the B.S.S.R. were the 120,514,000 roubles allocated to the timber industry. This represents 28 per cent. of the total capital investments made in the Byelorussian budget for 1946.

Paper and Match Production

289 In 1937 paper production in the B.S.S.R. reached 57,100 tons, or 6.87 per cent. of the total paper production of the Soviet Union, which was 831,600 tons. B.S.S.R. production of paper in 1932 was 28,700 tons, or 6.09 per cent. of the total.

372 Pre-war match production in the B.S.S.R. was 28.9 per cent. of
433 total Soviet Union output. Output in the B.S.S.R. in 1950 is to be 1,550 million boxes, and depends on the restoration of the pre-war factories. One of the largest match and plywood factories in the U.S.S.R. before the war, was the plant at Borisov, which the Germans systematically looted and destroyed. Before the war this factory had eight automatic machines for the production of wood matches, which were then widely exported, some being shipped to the United Kingdom and the U.S.A. Plywood, box shook, and other wood products were also produced. During the war four of the machines were removed to Germany, and the remainder were demolished when the Germans retreated. In June 1946, when the UNRRA Mission to Byelorussia observed this factory, it had one unit assembled from salvaged spare parts; and this unit was producing at the rate of 300,000 pocket-boxes of matches daily. Many processes were being operated by hand.

The plant originally consisted of several buildings, most of which are still either in complete ruins or have only the walls standing, without windows or roofs. Concrete floor foundations remain, with a few imbedded iron bars to which pre-war machinery was bolted. Present operations are carried out in the single building which has been restored, and is covered with a new roof. At present, one-third of the match factory space, and one-fifth of the total floor space is in operation. Present plans call for an output of 600 million boxes a year by 1950, or 1,397,000 boxes a day. Before anything like this output can be achieved, several more buildings must be restored, and additional machinery must be procured. Moreover, the demolished
372 electric power plant adjacent to the factory must also be restored to pre-war capacity. The Mission reported, however, that as at most other factories, building restoration was almost entirely a hand process;

372 only one concrete mixer was observed. Before the war, the Borisov match factory had 5,000 workers; in June 1946, the number was only 700.

## Peat

316 For most countries the output of peat may not be a significant index of industrialization. In Byelorussia, however, it has been and remains one of the primary indications. For example, 91 per cent. of the steam power plants erected during the first Five Year Plan were based on peat as a fuel. In addition to this use, large quantities of peat are to be used as fertilizer in the next five years.

135 At January 1, 1934, peat deposits in Byelorussia were estimated at 2,670 million tons, compared with 95,426 million tons in the entire Soviet Union. (Later estimates for the U.S.S.R. give the figure of 150,000 million tons, 48.5 per cent. of total world reserves.)

316 In 1932 the output of peat in the B.S.S.R. amounted to 834,000
•433 tons (6.06 per cent. of Soviet Union output). Production in 1937 rose to 2,445,300 tons, and for 1940 was estimated at 3,260,000 tons. The Five Year Plan fixes the B.S.S.R.'s output of peat in 1950 at 4,162,000 tons, and provides that peat workings with an aggregate annual capacity of 1.6 million tons shall be put into operation, and peat briquette plants built with an annual capacity of 130,000 tons.

## Textiles and Clothing

288 The textile industry of Byelorussia is centred in the Vitebsk and
433 Mogilev areas, which saw extensive development under the pre-war Five
185 Year Plans. No major change in the distribution is foreseen in the next five years, at the end of which Vitebsk and Polotsk oblasts, together with parts of Mogilev and Molodechno oblasts, are scheduled to contribute 83 per cent. of the Byelorussian textile output. Some of the production targets for 1950 are as follows:

| | |
|---|---|
| Cotton cloth | 2 million metres |
| Linen cloth | 3 " " |
| Woollen cloth | 1,660,000 metres |
| Carpet | 1,254,000 metres |
| Plush | 290,000 metres |

The output of woollens, carpet, and plush is to be obtained from new factories scheduled for construction in Vitebsk, Minsk, and Grodno. Linen will be produced in restored factories; and it should be pointed out that the figure of three million metres is additional to a considerable output of linen cloth expected in 1950 from the restored linen combinat in Orsha, an enterprise under the management of the U.S.S.R. Textile Ministry. (In pre-war years, this linen mill, which was built during the first Five Year Plan), had a capacity of 14 million metres of cloth per year.)

288 The output of cotton cloth in the B.S.S.R. will also come from
433 restored mills. The two million metre target is considerably below
185 the 1937 output of 9.3 million metres (0.27 per cent. of total Soviet production), and even below the 1932 rate of 4 million metres, or 0.15 per cent. of the Soviet Union total.

295 Finished clothing, shoes, and hosiery in the B.S.S.R. are produced
433 under the Byelorussian Ministry of Light Industry; and the output in
185 1950 is expected to be as follows:

| | |
|---|---|
| Shoes | 7 million pairs |
| Hosiery | 13.5 " " |
| Knitted underwear | 3,510,000 units |
| Knitted clothes | 1,680,000 " |

The shoe output will come mainly from large restored factories in Minsk, Vitebsk, Gomel, and other cities. The above figure does not include output under co-operative and local industry; the total shoe production in Byelorussia in 1950 being set at 9,430,000 pairs, as compared with 8,075,000 pairs in 1937, (4.41 per cent. of total Soviet production) and 3,462,000 pairs in 1932, (3.98 per cent. of the Soviet Union output).

The lower production targets for cotton cloth and hosiery may be associated with the fact that the U.S.S.R. now has available new sources of textiles and clothing, notably at Lvov, Khaipola, Riga, Narva, Tallin, and other Baltic cities. Moreover, under the national Five Year Plan for the U.S.S.R., the cotton textile industry of Central Asia will be expanded near the sources of raw cotton, and proportionately less cotton will have to be shipped to processing mills in European areas of the Soviet Union.

## Electric Power Stations

377 In 1937 the electric power stations of the B.S.S.R. had a capacity of 88,600 kilowatts and produced 430.4 million kilowatt hours of electric energy. Considerable progress had been made in electrification since 1932, when the B.S.S.R.'s stations had a total capacity of 60,000 kilowatts and produced 176.7 million kilowatt hours. For the entire Soviet Union, the output of electric energy in 1937 was 36,400 million kilowatt hours, as compared with only 13,540 million in 1932.

377 During the war the electric power stations of Byelorussia were
727 almost completely destroyed by the Germans. Since liberation they have been restored to only a limited extent, despite assistance from UNRRA, which, as part of the industrial rehabilitation programme, has furnished a number of power stations complete. In June 1946, when UNRRA Mission members visited Borisov, Orsha, Vitebsk, and Polotsk, facilities were estimated to be as follows.

Belorussia RC1

russia became reunited at the price of Western Byelorussia accepting the Soviet totalitarian régime. The B.S.S.R. increased its territory from 48,000 to 80,000 square miles and almost doubled the number of its inhabitants. The merger of Western and Eastern Byelorussia created a State of over 10,000,000 inhabitants uniting almost the entire Byelorussian people. The annexation of Western Byelorussia enabled the Soviet Union to push nearer to Central Europe, but from a merely economic point of view the territory was a liability. Western Byelorussia was easily the most backward part of the Polish State as it existed in the inter-war period. The territory is devoid of any large industry, its agricultural soil is poor and there are but few rail and road communications. Marshes cover a considerable part of Western Byelorussia. In the annexed former Polish province of Polesia which is 14,000 square miles in area, the famous Marshes of Pinsk or Pripet Marshes form 56 per cent of the total territory.[34]

There are but few small towns in Western Byelorussia; only two localities have about 50,000 inhabitants each, Grodno and Brest Litovsk. Originally 'Western Byelorussia' as it had emerged from the Molotov-Ribbentrop deal for the partition of Poland, had one town of 100,000 inhabitants, Bialystok, a centre of the Polish textile industry and the only place in the whole of 'Western Byelorussia' possessing a fairly large industrial class. For this reason, Bialystok was chosen as a kind of emergency capital of Western Byelorussia during the weeks between its occupation by the Red Army and its full incorporation into the B.S.S.R. The 'Peoples Assembly' of Western Byelorussia which on October 28th, 1939, formulated its 'request for admission into the U.S.S.R.' also met in Bialystok.

The new 'centre of Western Byelorussia' had the drawback that it had no Byelorussian population; it had only Polish and Jewish inhabitants and the outskirts of the town were Polish. In view of the national composition of Bialystok and its surroundings the Soviet Government was unable to maintain its claim to the Bialystok area after the end of the war, particularly since it was located to the east of the Curzon line which Russia adopted in principle as the Polish-Russian frontier. The area of Bialystok covering roughly 5,800 square miles was thus re-allocated to Poland. This transfer was advantageous for the Soviet Union since the B.S.S.R. rid itself thereby of a Polish population of 1,000,000 and thus considerably reduced the seriousness of the minority problem within its boundaries.

After the annexation of Western Byelorussia the minority issue threatened to cause considerable worry to the Minsk Government, since half of the annexed population were either Poles or Jews. In the post-war B.S.S.R. this problem no longer arose not only because of the substantial frontier rectification in Poland's favour in the Bialystok area,